

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A light sensor for determining a position of a light source, the light sensor comprising:

a ~~photo-detector~~ photodetector, and

a light modulator configured to modulate a quantity of light hitting the ~~photo-detector~~ photodetector based on an incident angle ( $\alpha$ ) of output light from the light source,

wherein the light hitting the ~~photo-detector~~ photodetector falls on the ~~photo-detector~~ photodetector without substantial dispersion of the light, and

wherein the light modulator comprises a transparent block having a cavity ~~[[from]~~ formed in a side of the transparent block where the light enters the transparent block.

2. (Previously Presented) The light sensor of claim 1, further comprising a sealing cap.

3. (Previously Presented) The light sensor of claim 1, further comprising an absorption element in a path of at least some rays of the light.

4. (Currently Amended) The light sensor of claim 3, wherein the absorption element comprises a disk between the ~~photo-detector~~ photodetector and the light modulator.

5. (Canceled)

6. (Previously Presented) The light sensor of claim 1, wherein the cavity includes disk-shaped superposed areas.

7. (Original) The light sensor of claim 6, wherein the disk-shaped superposed areas each include cone-shaped side walls.

8. (Currently Amended) The light sensor of claim 1, wherein the ~~photo-detector~~ photodetector is configured to convert at least a portion of the light hitting the ~~photo-detector~~ photodetector into an electric signal.

9. (Original) The light sensor of claim 8, further comprising a switch configured to determine a position of the light source based on the electric signal.

10. (Currently Amended) A light sensor, comprising:  
a ~~photo-detector~~ photodetector, and

a light modulator configured to modulate a quantity of light hitting the ~~photo-detector~~ photodetector, the light modulator comprising a transparent block having a cavity formed in a side of the transparent block where the light enters the transparent block, the cavity including disk-shaped superposed areas having cone-shaped side walls configured to direct the light onto a particular portion of the ~~photo-detector~~ photodetector based on an incident angle of the light.

11. (Currently Amended) The light sensor of claim 10, wherein the light hitting the ~~photo-detector~~ photodetector falls on the ~~photo-detector~~ photodetector without substantial dispersion of the light.

12. (Currently Amended) The light sensor of claim 10, wherein the light modulator is configured to modulate the quantity of light hitting the ~~photo-detector~~ photodetector based on an incident angle ( $\alpha$ ) of the light.

13. (Original) The light sensor of claim 10, further comprising a sealing cap.

14. (Original) The light sensor of claim 10, further comprising an absorption element in the path of at least some of the rays of the light.

15. (Currently Amended) The light sensor of claim 14, wherein the absorption element comprises a disk between the ~~photo-detector~~ photodetector and the modulator.

16. (Original) The light sensor of claim 10, wherein the photodetector is configured to generate an output signal to control an air-conditioning system in a vehicle based on a position and intensity of a light source that provides the light.

17. (Previously Presented) A system, comprising the light sensor of claim 1, wherein the photodetector is configured to:

determine a position of a light source;  
determine an intensity of the light source; and  
generate an output signal to control an air-conditioning system in a vehicle based on the position and intensity of the light source.

18. (New) The system of claim 17, wherein the cavity includes disk-shaped superposed areas.

19. (New) The system of claim 18, wherein the disk-shaped superposed areas each include cone-shaped side walls.

20. (New) The system of claim 17, wherein the photodetector is configured to convert at least a portion of the light hitting the photodetector into an electric signal.

21. (New) The system of claim 20, further comprising a switch configured to determine a position of the light source based on the electric signal.

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